IN THE CLAIMS

Please amend the claims as follows:

1-19. (Cancelled).

20. (Currently Amended) [[An]] A method ~~article~~ comprising the steps of:

~~a substrate; and~~

forming an invisible symbol on [[the]] a substrate ~~wherein the invisible symbol is formed by~~ using a compound which includes a cyano group and has an infrared absorption wavelength apart from that of the substrate when heated;

heating the invisible symbol formed on the substrate;

detecting infrared light emitted from the invisible symbol;

calculating a differential coefficient of a detection signal corresponding to a position on the substrate;

determining, based on upper and lower threshold values set for the differential coefficient, a maximum value of the differential coefficient in a region exceeding the upper threshold value and a minimum value of the differential coefficient in a region smaller than the lower threshold value; and

binarizing the detection signal by using the maximum or minimum value as a leading or trailing edge of a binary function.

21. (Currently Amended) The ~~article~~ method of claim 20, wherein the compound [[has]] includes a polymer including a cyano group and the step of forming comprises the step of:

forming the invisible symbol using the compound including the polymer including the cyano group.

22. (Currently Amended) The ~~article~~ method of claim 20, wherein the substrate is made of paper, polymer or cloth and the step of forming comprises the step of:

forming the invisible symbol on the substrate made of paper, polymer or cloth.

23. (Currently Amended) The ~~article~~ method of claim 20, wherein the heating step further comprises the step of:

heating the compound ~~emits infrared light when heated~~ to 50 degrees in Centigrade or more.

24. (Currently Amended) The ~~article~~ method of claim 20, wherein the invisible symbol is a barcode having minimum bar width about 250 micro-meter and the step of heating further comprises the step of:

heating the barcode.

25. (Currently Amended) The ~~article~~ method of claim 20, wherein the wavelength of the infrared emission is ~~around~~ about 4.5 micro-meter and the step of detecting further comprises the step of:

detecting the infrared emission with the wavelength of about 4.5 micro-meter.

26. (Currently Amended) The ~~article~~ method of claim 20, wherein the forming step comprises the step of:

printing the invisible symbol ~~is printed~~ on the substrate using a laser beam printer.